OIL PRESSURE SENSOR INSTRUCTIONS

Overview:

The oil pressure sensor is an economy based single wire pressure sensor. If your pressure sensor has three wires, please refer to the Pressure Sensor instructions. The oil pressure sensor has a maximum range of 100 psi and is only intended to be used for oil pressure.

Part Numbers:

#8026   Oil PSI Sensor   *RTD & GND Dip Switches ON*

Installation:

When installing the oil pressure sensor, you can mount the sensor directly to the engine. There is a screw post on the other end of the sensor that you will need to connect a wire to, and run to a *DATAMAXX* module. This module can be either the Main module or an expansion analog module and will be going into an available analog channel.

After mounting the sensor in its correct location, run a single 14-20 gauge wire to an available analog channel. This wire will be plugged into an "A- WHT" terminal, and will not need a ground wire connected as the sensor housing itself acts as the connection to chassis ground.

> **Note:** When using the oil pressure sensor, you must make a change to the dip switch settings. Both the "RTD" and "GND" dip switches must be in the ON position for the specific channel that you installed the economy sensor on. Failure to do so will result in erratic readings.

After wiring the sensor, we need to change a dip switch setting before the hardware will work correctly. To do this, flip the module lid over to expose the unobstructed view of the wiring diagram. Determine which channel you installed the oil pressure sensor in and then locate that specific channels RTD and GND dip switches. Turn both of these switches to the ON position.

Dip Switches:

RTD – ON

GND - ON

Calibration

After installing your pressure sensor, you will need to tell the computer and the *DATAMAXX* what type of sensor it is. You will also need to know which Module and analog channel that you have plugged it into.

To Calibrate:
- Follow the Initial Calibration instructions in the Software section, OR:
- Record a short 5 second test log file, and download the log file correctly using the SD button.
- Select Edit, then Properties. You are now in the Channel Properties area.
- Find the Analog channel line that you installed the sensor on, follow it to the right, and click on the finger pushing a red button.
- Change the "Type of Sensor" and the "Channel Name" to what you want.
   - The type of sensor should be listed on the side of the pressure sensor unless it is the single wire economy oil pressure sensor, which will be the Autometer Oil sensor.
       - Note that if you have selected "Autometer Oil" from the drop down list, the corresponding RTD and GND dip switches need to be ON.
- When you are done, select OK, and then "Send Config to DataMaxx".

Testing:

All pressure sensors should read approximately zero when there is no pressure applied. The only way to truly test a pressure sensor is to apply pressure to it and watch for a reaction.
If for some reason a sensor is consistently reading a value other than zero at rest, you can "Zero" a sensor. To do so, please see the "Custom Calibration / Zeroing Sensors" in the Software section.

Troubleshooting:

If your single wire oil pressure sensor is not reading or working correctly please follow the following steps.

- Verify The Calibration: Record a short 5 second log file, and download to your computer using the SD button in the DataMaxx software and save to an event. Once the log file is open, select Edit, then Properties. Find the channel in question and verify that the calibration is set to "Autometer Oil". If it is not, follow the calibration instructions for the calibration instructions for Oil Pressure.

- Check Dip Switch Settings: The single wire oil pressure sensor is one of the few sensors that need to have the default dip switch settings changed. First verify by looking on the back side of the module lid which channel you have the oil pressure sensor installed. Then, using the lid find the corresponding RTD and GND dip switches and make sure that both of these are on.

- Check the Sensors Ground: Because the oil pressure sensor is a single wire sensor, it depends on the sensor threads making a good connection to ground through wherever it is installed. Sometimes an excess of Teflon tape can cause the threads to not make a good connection to ground and can cause inconsistent readings. Sometimes the location you mounted the sensor is floating via a gasket and therefore does not complete the circuit well. To test this, simply make a jumper wire, connect one side to ground, and hold the other side to the chassis of the sensor. If doing this fixes the sensor, then you need a better ground.

ZEROING SENSORS

Sometimes a sensor will not always read absolutely zero, or be off by a certain amount. The DataMaxx software has the ability to rectify this with our "Make Minor Adjustment" feature.

1. Open a log file that needs to be adjusted. Go to Edit, and then Properties.

2. Find the sensor that needs adjusting, follow the line to the right, and click on the "Calibration" button (finger pushing a red button).

3. To the right of the "Type of Sensor" drop down list, click on the "Calibration" button again.

4. Click on the "Calibration Builder" tab at the top, and make sure that the check box is checked for "Use Calibration Builder" for this sensor.

5. The bottom is the area where you can make minor adjustments to all your readings. If your sensor is always reading 2 psi higher than it should then you would want to type in -2, and then hit the "Add Adjustment to All Readings" button.

6. Select Ok, and then Ok again, to get you back to the channel properties.

7. Because this has now changed the sensor to a Custom calibration, the software does not know which zone to place it in. So click on the "All-In-One View" preferences button and change the sensors zone to the correct zone.

8. When you are done, click on the "Send Configuration to DataMaxx (via SD Card)" button at the bottom right of the channel properties screen. It should then ask you if you

want to set the Hardware Clock. If you are near the DataMaxx system then say Ok, if not then select No (for every second it takes you to get to the system is a second the SD card does not know has past—for instance, if it takes you 3 minutes to get to the DataMaxx your clock will be 3 minutes slow). Then select Ok, and Ok again, then take the SD card out of your computer.

9. Take the SD card to your DataMaxx system, turn the power on, wait at least 5 seconds and then place the SD card into the Main Module. You will notice the lights on the Main Module acting unusual, and if you have an LCD Dash you will see thing—such as Config #10 done. Wait approximately 1 minute and you have completed your DataMaxx LCD Dash Calibration.